

Draft

Appendix B

Accessibility Standards

Resources:

The authority on web standards, including accessibility by the disabled, is the World Wide Web Consortium. They maintain information specifically on accessibility at:

<http://www.w3.org/TR/1999/WAI-WEB-CONTENT-19990505/>

CAST a not-for-profit organization that purportedly uses technology to expand opportunities for all people, including those with disabilities, maintain a website that includes free software called “Bobby” that will check your web pages for accessibility. It is at:

<http://www.cast.org/bobby/>

Jakob Nielsen, author of *Designing Web Usability* and several other books on web design, maintains a site with useful information of all types related to web design and development at:

<http://www.useit.com/>

General Notes on Accessibility Solutions

(condensed and paraphrased from Jakob Nielsen’s book *Designing Web Usability*)

For Visual Disabilities:

- ◆ Color
 - Use caution with color combinations – some combinations (especially green and red) of background and foreground colors make pages virtually unreadable for colorblind users.
 - Ensure high contrast between foreground and background colors and avoid busy background patterns.
- ◆ Long Pages - Facilitate scanning by emphasizing the structure of the pages with proper HTML markup:
 - Use <H1> for highest level heading,
 - Use <H2> for the main parts of the information within the <H1>.
 - Use <H3> for lower levels for even finer divisions of the information.

By doing so, the blind user can get an overview of the structure of a page by having the <H1>s and <H2>s read aloud, and can quickly skip an uninteresting section by instructing the screen reader to jump to the next lower-level heading.
- ◆ Font Sizes – Important to reduced sight users (not totally blind):
 - Do not use absolute font sizes – use relative – to support browser’s ability to display in different font sizes.
 - Test pages with default font set to 10, 12 and 14 points to ensure that design is optimal for these common font sizes.
 - Test pages with default font set to 18 and 24 points to make sure that the design still works at these accessibility-enhancing sizes (not necessarily as good, just acceptable for required page layout)
- ◆ Images – Provide alternative with ALT text.
 - Use the ALT attribute for all images (except those that are purely decorative and have no meaning).
Example:
 -
 - Keep ALT text limited to the meaning or role of the image, rather than simply a wordy description of the image content.

- Use “Photo of Jacob Nielsen”.
Avoid “Photo of a man in his early 40s with blond hair and glasses, wearing a tasteful red tie.”
- Use “XYZ home page” if logo image is a link back to the home page, instead of just “XYZ Corporation logo”.
- Use “XYZ Corporation Logo”. (Put the most important word first.)
Avoid “Logo of XYZ Corporation”.
- Keep ALT text brief and to the point, typically no more than 8 to 10 words.
- ALT text may also be used to provide a small amount of additional information, useful to both sighted and blind users, but remember to keep it clear in content for the blind.
- Do not use ALT text for purely decorative images – there is no need to slow down blind readers who will have to hear an explanation that is not important to them. However, be sure to still code an empty ALT string rather than no ALT text at all because the presence of the empty ALT string is a signal to screen-reading software that it can skip the image. If no ALT text is present in an image tag, most screen readers would feel obliged to inform their user that an unknown image was present because there would be no way of knowing whether the image was important.
- Use ALT="".
- Avoid ALT="large blue bullet".

For Auditory Disabilities:

- ◆ Provide transcripts for spoken audio clips.
- ◆ Provide subtitled versions of videos.

For Speech Disabilities:

- ◆ Not a problem until future developments make speech the primary or only input modality.

For Motor Disabilities:

- ◆ If you must use an imagemap, do not require extremely precise mouse positioning.

For Cognitive Disabilities:

- ◆ Provide clear and simple navigation.
- ◆ Provide sitemaps for those who may have difficulty visualizing the structure of the information.
- ◆ Provide enhanced search capabilities:
 - Spelling-reduced search.
 - Similarity search (Give me more like this – while pointing to existing documents).
 - Parametric search (search based on value ranges)
- ◆ Facilitate scanning of long pages by proper use of headings.
- ◆ Select words with high information content as hypertext anchors (avoid “click here”).

Pragmatic Accessibility

You can't always follow every accessibility guideline, but include as many accessibility features as possible, checking for optimal compliance as follows:

- ◆ Check for accessibility problems with images turned off in your browser.
- ◆ Check for accessibility problems with a grayscale version .
- ◆ Check for accessibility problems with Bobby software from the CAST website.

Excerpts from Standards Currently Being Drafted by the Advisory Council for Technology Access by the Visually Impaired

Modality Independence:

- ◆ Provide ALT text for all images and image submit buttons.
- ◆ Provide ALT text for each APPLET.
- ◆ Provide transcripts for all audio files.
- ◆ Tie text transcripts to audio clips using the REL attribute.
- ◆ Provide a description and a caption for all video information.
- ◆ Provide visual notification and transcripts of sounds that are played automatically.
- ◆ Each FRAME must reference an HTML file.

Output Display Independence:

- ◆ Support document structure with proper use of structural elements.
- ◆ Use style sheets to control layout and presentation wherever possible.
- ◆ Use relative sizing and positioning rather than absolute.
- ◆ Nest headings properly.
- ◆ Encode list structures and list items properly.
- ◆ Avoid deprecated elements.
- ◆ Avoid using movement where possible.
- ◆ Provide a mechanism to allow users to freeze movement or updating in applets and scripts.
- ◆ Provide an alternative page with manual refreshing to page with auto-refreshing.
- ◆ Avoid blinking or scrolling text created with the BLINK element or the MARQUEE.

Control Device Independence:

- ◆ Ensure that pages are readable and usable without frames.
- ◆ Provide alternative content for each SCRIPT that conveys important information or function.
- ◆ Make sure that style sheets fail gracefully.
- ◆ Consider adding keyboard shortcuts to important links.
- ◆ Furnish keyboard shortcuts for form elements.
- ◆ Specify a logical tab order among form controls.
- ◆ Include default, place-holding characters in edit boxes and text areas.
- ◆ Separate adjacent links.
- ◆ Do not use pop-up windows or change active window unless the user is aware this is happening.

Meta-information:

- ◆ Give each frame a title.
- ◆ Use the ABBR and ACRONYM elements to denote abbreviations and acronyms.
- ◆ Group related controls and label each group.
- ◆ Associate labels with their form controls.
- ◆ For long lists of selections, group items into a hierarchy.
- ◆ If possible, avoid using tables to format text documents columns.
- ◆ Provide summaries for tables of data.
- ◆ Identify headers in table rows and columns.

- ◆ Provide abbreviations for lengthy row or column labels.
- ◆ Create link phrases that make sense when read out of context.

General Recommendations:

- ◆ Use a validator to check pages for compliance with W3C HTML specifications.
- ◆ Make applets as accessible as possible.
- ◆ Provide accessible alternatives to the information scripts, applets, or objects.
- ◆ If a page cannot be made adequately accessible, construct an alternate version which is accessible.